

WHAT IS CLAIMED IS:

1. A cervical medical device, comprising:
an elongated member sized to be inserted into an undilated cervical canal;
an expandable mechanism attached to the elongated member; and
an anchoring feature to anchor the device within the cervical canal.
2. The device of Claim 1, wherein the anchoring feature is a deployable component attached to the elongated member distally of the expandable mechanism.
3. The device of Claim 1, wherein the anchoring feature is an uneven outer surface of the expandable mechanism when it is expanded.
4. The device of Claim 3, wherein the expandable mechanism is a corrugated balloon.
5. The device of Claim 3, wherein the expandable mechanism is a ridged balloon.
6. The device of Claim 1, wherein the elongated member comprises a lumen running through a length of the device.
7. The device of Claim 2, wherein the anchoring feature and the expandable mechanism are independently inflatable balloons.
8. The device of Claim 3, wherein the anchoring feature is a series of spaced ridges along a length of the expandable mechanism.
9. A cervical anchoring method, comprising:
inserting a hollow tube into a cervical canal;
inserting at least one expandable dilator into the cervical canal; and

radially expanding the at least one expandable dilator within the canal to dilate the cervical canal while the tube is in the canal.

10. The method of Claim 9, wherein the at least one expandable dilator is attached to the outer surface of the hollow tube.

11. The method of Claim 9, wherein the at least one expandable dilator is inserted through the hollow tube and expands the tube.

12. The method of Claim 11, wherein the at least one expandable dilator comprises a series of successively larger dilators.

13. The method of Claim 10, wherein the at least one expandable dilator has a corrugated outer surface.

14. The method of Claim 10, wherein the at least one expandable dilator has an uneven outer surface.

15. The method of Claim 10, wherein the at least one expandable dilator has a ridged outer surface.

16. The method of Claim 10, wherein the at least one expandable dilator comprises a series of two balloons along the tube.

17. The method of Claim 16, wherein the series of two balloons comprises an anchor balloon distally of a dilating balloon.

18. A cervical dilating device, comprising:
an elongated member having a proximal end and a distal end;
a first expandable component attached to the distal end of the elongated member; and

a second expandable component attached to the elongated member proximally of the first expandable component.

19. The device of Claim 18, wherein the elongated member comprises a lumen running through an entire length of the device.

20. The device of Claim 18, further comprising an expansion mechanism coupled to the first and second expandable components, wherein the expansion mechanism is configured to expand the first and second expandable components.

21. The device of Claim 20, wherein the expansion mechanism is a fluid-filled syringe.

22. The device of Claim 20, wherein the expansion mechanism is a gas-filled syringe.

23. The device of Claim 18, wherein the first and second expandable components are independently expandable.

24. The device of Claim 18, wherein the first and second expandable components are inflatable balloons.

25. The device of Claim 18, wherein the first expandable component is a rounded balloon and the second expandable component is a cylindrical balloon.

26. The device of Claim 18, wherein the first and second expandable components are adjustable between a radially collapsed condition and a radially expanded condition.

27. The device of Claim 18, further comprising an optical imaging component in the elongated member.

28. The device of Claim 18, wherein the second expandable member has a length between 40 millimeters and 100 millimeters when expanded.

29. The device of Claim 18, wherein the second expandable member has a diameter between 5 millimeters and 20 millimeters when expanded.

30. The device of Claim 18, wherein the second expandable member has a diameter less than about 3 millimeters when collapsed.

31. A cervical sealing device, comprising:
an elongated member having a proximal end and a distal end;
an expandable seal assembly attached to the elongated member, wherein the seal assembly has an uneven surface in an expanded condition.

32. The device of Claim 31, wherein the elongated member comprises a lumen running through a length of the device.

33. The device of Claim 31, further comprising an expansion mechanism coupled to the seal assembly, wherein the expansion device is configured to expand the seal assembly.

34. The device of Claim 33, wherein the expansion mechanism is a fluid-filled syringe.

35. The device of Claim 33, wherein the expansion device is a gas-filled syringe.

36. The device of Claim 31, wherein the seal assembly has a length between 40 millimeters and 100 millimeters when expanded.

37. The device of Claim 31, wherein the seal assembly has a diameter between 5 millimeters and 20 millimeters when expanded.

38. The device of Claim 31, wherein the seal assembly is a corrugated balloon.

39. The device of Claim 31, wherein the seal assembly is a balloon having a series of evenly spaced ridges along its length;

40. The device of Claim 39, wherein the balloon has between 3 and 4 ridges.
41. The device of Claim 31, wherein the seal assembly is a dimpled balloon.
42. A method of dilating a cervical canal, comprising:
inserting a dilating device into the cervical canal, the dilating device comprising an elongated member, a first expandable component attached to a distal end of the elongated member, and a second expandable component attached to the elongated member proximally of the first expandable component;
expanding the first expandable component;
retracting the dilating device until resistance is felt while the first expandable component is expanded; and
expanding the second expandable component in the cervical canal after retracting.
43. The method of Claim 42, wherein the device further comprises an expansion mechanism coupled to the first and second expandable components.
44. The method of Claim 42, wherein the first and second expandable components are expanded using a fluid-filled syringe coupled to the first and second expandable components.
45. The method of Claim 42, wherein the first and second expandable components are expanded using a gas-filled syringe coupled to the first and second expandable components.
46. The method of Claim 42, wherein the first and second expandable components are rigid-walled balloons.
47. A method of sealing a cervical canal, comprising:

introducing a sealing device in the cervical canal, the device comprising a tube and an expandable seal assembly attached to the tube, wherein the seal assembly has an even surface when it is expanded; and

expanding the seal assembly after introducing.

48. The method of Claim 47, wherein the device further comprises an expansion mechanism coupled to the seal assembly.

49. The method of Claim 48, wherein expanding comprises filling a balloon with a fluid.

50. The method of Claim 47, wherein seal assembly is a balloon having a series of spaced ridges along its length.

51. The method of Claim 47, wherein seal assembly is a corrugated balloon.

52. A method of providing a seal for a cervical canal, comprising:

inserting a cervical sealing device into the cervical canal, the device comprising a cannula having a plurality of valves, and an inflatable balloon attached to the cannula, wherein the balloon has an uneven surface when inflated; and

inflating the balloon while the device is in the cervical canal.

53. The method of Claim 52, wherein the device further comprises an obturator.

54. The method of Claim 53, further comprising removing the obturator after the cannula is inserted.